

ABSTRACT

An apparatus, method, and system for ensuring a more accurate and precise calibration of gas or liquid analyzers using gas emitting permeation tubes for the production of calibration
5 samples. The permeation devices are placed in a temperature-controlled housing to ensure that calibration samples are produced at the optimal temperature for such devices. The housing temperature may be controlled by a semi-conductor heating and cooling device. The apparatus also controls the flow rate of the medium that is mixed with the impurities released from the permeation devices, yielding a more accurate, precise, and reliable calibration. The
10 sample can be conveyed to the calibration device/instrument by hooking the apparatus directly to the calibration device. The invention also contemplates a novel method of calibrating apparatuses using a device kept at the optimal temperature, using a constant flow rate that minimizes variations in the calibrations.